



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,813	06/26/2003	Young-Woo Lee	1293.1746	2773
21171	7590	06/08/2009	EXAMINER	
STAAS & HALSEY LLP			ORTIZ CRIADO, JORGE L	
SUITE 700				
1201 NEW YORK AVENUE, N.W.			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20005			2627	
			MAIL DATE	DELIVERY MODE
			06/08/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/603,813

Filing Date: June 26, 2003

Appellant(s): LEE ET AL.

---

Gregory W. Harper  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 9, 2009 appealing from the Office action mailed May 15, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(4) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(5) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(6) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(7) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

## (8) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

## **(9) Evidence Relied Upon**

6,144,625 Kuroda et al. 11-2000

Official Notice taken by the examiner which is evidenced by Applicant's own admission of prior art.

## **(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claim 10-12, 14-16, and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kuroda et al. U.S. Patent No. 6,144,625.

Regarding claim 10, Kuroda et al. discloses an apparatus identifying a disc type (see Figs 1-2, 6; see col. 6, lines 25-67; col. 11, lines 9-11), comprising:

a servo controller that enables tracking and focusing (see col. 7, lines 45-59; col. 9, lines 18-24):

an RF amplifier (7, 7a) that produces a push-pull signal from a light wave reproduced from a disc; and

an LPP signal detector (13) that detects a certain voltage level (reference value) in the push-pull signal immediately after the servo controller enables tracking (see col. 8, lines 6-29; see Fig. 6, immediately after step 11 col. 11, lines 29-34);

wherein if the certain voltage level is detected (see col. 8, lines 6-29) the disc is identified as a DVD(-)/ “R” type disc (see Fig. 6, step 25 “YES”, step S23) and if the certain voltage level

is not detected the disc is identified as a DVD(+)/ “other” type disc (see Fig. 6, step 25 “NO”, step S17) and

wherein the LPP detector (13) detects an LPP signal according to detection of the certain voltage level by slicing the push-pull signal at a constant level (see col. 8, lines 6-29).

Kuroda et al discloses wherein the DVD are recordable discs and determines that the disc is a DVD(-)/ “R” type disc when the LPP signal is detected, and that the disc is a DVD(+)/ “other” type disc when the LPP signal is not detected, hence determines disks among DVD (-) and DVD (+), such as read only (R) or Rewritable (RW), and therefore meets the claim.

In the alternative, assuming *arguendo* that Kuroda et al does not mention or disclose that these types of discs are in fact included/implied among them, the examiner takes Official Notice with documentary evidence, that DVD(-) type discs, including DVD-RW and DVD-R discs, and DVD(+) type discs, including DVD+RW and DVD+R discs, are old and well known in the art, evidenced by Applicant’s Background of the invention (admission of prior art) [003]-[005].

Therefore, it would have been obvious to one of ordinary skill in the art to determine disks between DVD (-) and DVD (+), specifically RW and R type discs, since Kuroda et al teaches discriminating between DVD(-)/”R” type discs and DVD(+)/”other” type discs, and because RW and R type discs are known to be included among DVD (-) and DVD (+) type discs.

Regarding claim 11, Kuroda et al. discloses wherein the LPP detector (13) detects an LPP in the push-pull signal by detection of the certain voltage level (see col. 8, lines 6-29).

Regarding claim 12, Kuroda et al. discloses a system controller (9) that controls a disc drive and identifies the disc type (Figs 1).

Regarding claim 14, Kuroda et al. discloses an optical detector (1) that detects the light wave reflected from the disc (see Fig. 1).

Regarding claim 15, Kuroda et al. discloses wherein the optical detector (1) comprises: a structure divided into four sections having a first photodiode, a second photodiode, a third photodiode, and a fourth photodiode (see Fig. 1).

Regarding claim 16, Kuroda et al. discloses wherein the RF amplifier (7, 7a) comprises: a current-to-voltage converter having a first amplifier, a second amplifier, a third amplifier, and a fourth amplifier, wherein the four amplifiers convert output signals from corresponding first through fourth photodiodes of the optical detector to voltage values (inherent to Kuroda et al.); and

a push-pull operator having a first adder (19), a second adder (20), and a subtracter (21), wherein the first adder adds output signals of the first amplifier and the second amplifier to produce a first added signal, the second adder adds output signals of the third amplifier and the fourth amplifier to produce a second added signal, and the subtracter adds the first added signal and the second added signal to produce the push-pull signal (see Fig 2, # 7a).

Regarding claim 18, Kuroda et al. discloses an optical detector (1) having a bi-sectional structure that includes a first photodiode (B1B4) and a second photodiode (B2B3) (see Fig 2).

## **(10) Response to Argument**

(A) Appellant argues that the independent claim 10 of the present application discloses a technical feature wherein an LPP signal detector detects a certain voltage level in the push-pull signal immediately after the servo controller enables tracking, wherein if the certain voltage level is detected, the disc is identified as a DVD(-) type disc, and if the certain voltage level is not detected, the disc is identified as a DVD(+) type disc; the DVD(-) type discs include DVD-RW and DVD-R discs, the DVD(+) type discs include DVD+RW and DVD+R disc.

And that contrary to the above, Kuroda et al considers various conditions of error detections performed in some steps in order to determine the disc type, and cannot determine the disc type by only whether or not a certain voltage level is detected by LPP signal detector.

It is noted that Appellant's argument that the references fail to show certain features, particularly in that the determination is only whether or not a certain voltage level is detected by LPP signal detector, are not part of the claimed invention recited in claim 10.

Also, claim 10 recites the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., > Mars Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004). "Comprising" is a term of art

used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.

Furthermore, the fact that Appellant has recognized another features in Kuroda et al., it is noted all the claimed features are found and met by Kuroda et al.. The additional features found and removed would have been obvious to one of ordinary skill in the art.

As claimed, Kuroda et al. does discloses an LPP signal detector detects a certain voltage level in the push-pull signal and if the certain voltage level is detected or not, the disc determination an identification is obtained whether or not a certain voltage level is detected by LPP signal detector.

(B) Appellant argues that Kuroda et al. fails to disclose the technical features of the independent claim 10 that LPP signal detector that detects a certain voltage level in the push-pull signal immediately after the servo controller enables tracking.

The claims are given their broadest reasonable interpretation in light of the supporting disclosure and the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

It is noted that Appellant specification is silent about any specifics of “immediately” timings, or how long this encompassed or how long the process is waited, and/or as how quick the process change from one another, because there is absolutely no explanation of any sort in the specification about timing of events.

It is further noted that what the Appellant regards to be “immediately” is found beginning in the last two paragraphs of Appellants’ specification to be recited as “[a]s described above, according to the present invention, it is possible to identify a disc type based on whether an LPP signal is detected in the early stage of a disc driving period, i.e., immediately after controlling a tracking servo. Accordingly, operational conditions of a disc drive can be set in the early stage of the disc driving period and, thus, lead-in time of a disc can be reduced.”

Which in accords to steps 301 to 302 then 303 states there is a time period elapsed from 301 to 302 to allow the push-pull to be recovered (operational conditions setting period) and then at (303) the push-pull is detected to be at certain level.

Hence, it is readily understood that *immediately* after enabling tracking refers to *immediately* after controlling tracking servo conditions. During this control condition in the early stage a time period is elapsed until the tracking operation is stably obtaining the push-pull signal to be recovered. This clearly corresponds to the time encompassed by the pre-pit push-pull time detection period regarded by Kuroda et al., as well as to the time that is present in between processes 301-301 to 303 to allow the signal to be reproduced and compared is readily understood and flow from the Appellant’s specification.

Considering the claimed invention in light of the supporting disclosure, Kuroda et al. does discloses LPP signal detector that detects a certain voltage level in the push-pull signal immediately after the servo controller enables tracking, as specified in Fig. 6, immediately after step 11- col. 11, lines 29-34, which, for example, is after the tracking servo loop is formed in a closed condition so that that tracking control is performed.

Kuroda et al. discloses detecting by the LPP signal detector (13) at step s25 immediately after the tracking control is enabled/performed at step s11. The time in step 24, which is a start of, and strictly part of, the tracking control conditions period of push-pull signal and LPP detection process which is immediately after the tracking servo is enabled at step 11. Kuroda et al. clearly explain that the timer is merely the time considered to be sufficient for the pre-pit (LPP) push-pull detection, because the process of detecting the push-pull encompasses such time while performing the detecting operation. Therefore, the process of detecting the prep-it LPP is performed *immediately* after enabling tracking in Kuroda et al.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jorge L Ortiz-Criado/  
Primary Examiner, Art Unit 2627

Conferees:

/Andrea L Wellington/  
Supervisory Patent Examiner, Art Unit 2627

/WY/  
Wayne Young  
Supervisory Patent Examiner, Art Unit 2627